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EXAMINER	
VAUTROT, DENNIS L	

ART UNIT	PAPER NUMBER
2167	

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/828,308	MANO, HIROKO	
	Examiner	Art Unit	
	Dennis L. Vautrot	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 April 0204*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/21/04 & 6/23/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on 21 April 2004 and 23 June 2004 have been received and entered into the record. Since the IDS comply with the provisions of MPEP § 609, the references cited therein have been considered by the examiner. See attached form PTO-1449.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 8, 13, 14, 20, 25, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by **Nomiyama** (US 5,787,421).

4. Regarding claims 1 and 13 **Nomiyama** discloses a document retrieval apparatus and a method of retrieving documents, comprising:

a query character string input unit that accepts an input of a query character string including a plurality of retrieval keywords (See column 4, lines 24 – 27 "The user input/display module 210 gives a keyword to be retrieved or other commands to the keyword retrieval engine 208...");

a document select unit that selects one or more documents that match the query character string from a document database (See column 4, lines 55 – 60 "At step 304 the keyword or retrieval expression inputted thus is delivered to the keyword retrieval engine 208, by use of which the keyword retrieval engine 208 retrieves the keyword-to-ID index 204 and returns a set of Ids for documents corresponding to the keyword or retrieval expression.");

a retrieval result output unit that presents retrieval results of the selected documents to a user (See column 4, lines 61 – 65 "At step 306, based on a set of documents obtained at Step 304, the results of keyword retrieval (number of retrievals, title, or the like) are determined preferably on individual and separate windows in display 110 by the user input/display module 210."); and

a document output unit that presents the contents of one of the selected documents designated by the user (See column 5, lines 43 – 46 "At Step 408, by viewing titles of the list resultant from a retrieval displayed on a separate windows as a result of Step 406, a user selects one or plural documents that seem to be interesting."); wherein

the document output unit determines a manner in which the retrieval keywords are displayed in the presented one of the selected documents in accordance with a feature index indicating an extent to which each of the retrieval keywords has contributed [frequencies] to the selection of the documents (See column 4, line 66 – column 5 line 3 "At Step 308, all keywords of a specified category, attached to individual documents in the obtained set of documents, are determined and the frequencies for

each keyword attached to a set of documents obtained at Step 306 are counted."), and highlights the retrieval keywords in the determined manner (See column 5, lines 8 – 12 "At step 310, keywords obtained at Step 308 are sorted preferably in order of decreasing count value by using module 212 and displayed on individual and separate windows in display 110 by the user input/display module 210 also." Here, the manner in which to display the frequency is in a sorted list.)

5. Regarding claims 2 and 14, **Nomiyama** discloses the feature index corresponding to one of the retrieval keywords indicates the number of the selected documents including one of the retrieval keywords [number of documents containing individual keywords]. (See column 4, lines 28 – 34 "The keyword collection & sort module 212 performs a function to collect data on keywords contained in the documents retrieved by the keyword retrieval engine 208 and the number of documents containing individual keywords, to sort them in order of decreasing number of documents, to provide the data to the user input/display module 210, and to display them onto the display 110.")

6. Regarding claims 8 and 20, **Nomiyama** discloses a document retrieval apparatus and a method of retrieving documents, comprising:

a query character string input unit that accepts an input of a query character string including a plurality of retrieval keywords (See column 4, lines 24 – 27 "The user

input/display module 210 gives a keyword to be retrieved or other commands to the keyword retrieval engine 208...");

a document select unit that selects one or more documents that match the query character string from a document database (See column 4, lines 55 – 60 "At step 304 the keyword or retrieval expression inputted thus is delivered to the keyword retrieval engine 208, by use of which the keyword retrieval engine 208 retrieves the keyword-to-ID index 204 and returns a set of Ids for documents corresponding to the keyword or retrieval expression.");

a retrieval result output unit that presents retrieval results of the selected documents to a user (See column 4, lines 61 – 65 "At step 306, based on a set of documents obtained at Step 304, the results of keyword retrieval (number of retrievals, title, or the like) are determined preferably on individual and separate windows in display 110 by the user input/display module 210."); and

a document output unit that presents the contents of one of the selected documents designated by the user (See column 5, lines 43 – 46 "At Step 408, by viewing titles of the list resultant from a retrieval displayed on a separate windows as a result of Step 406, a user selects one or plural documents that seem to be interesting."); wherein

the query character string input unit can accept an input of a word other than the retrieval keywords that is to be highlighted by the document output unit in the presented one of the selected documents. (See column 1, lines 32 – 34 "Such retrieval expressions normally contain logical operations (AND, OR, NOT, and the like) for a

plurality of conditions." Here, the words, AND, OR, and NOT are accepted as input to the string in addition to the keywords that are to be highlighted.)

7. Regarding claim 25, **Nomiyama** discloses a computer program [retrieval engine] that causes a computer to operate as the document retrieval apparatus as claimed in claim 1. (See column 3, lines 44 – 46 "...a hard disk 108 in which an operating system for controlling the CPU 102, a database file, a retrieval engine, index file, and the like are stored.")

8. Regarding claim 26, **Nomiyama** discloses a computer readable recording medium [hard disk] storing the computer program as claimed in claim 25. (See column 3, lines 44 – 46 "...a hard disk 108 in which an operating system for controlling the CPU 102, a database file, a retrieval engine, index file, and the like are stored.")

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nomiyama** as applied to claims 1 and 13 above, and further in view of **Rubinstein et al.** (hereinafter **Rubinstein**, US 5,913,215). **Nomiyama** teaches a document retrieval

apparatus substantially as claimed. **Nomiyama** does not explicitly disclose a feature index/color table in which a corresponding relation of the feature index to a color is registered; wherein the document output unit determines the color corresponding to the feature index of each retrieval keyword with reference to the feature index/color table, and displays the retrieval keyword using the determined color in a different manner from a manner in which other words are displayed.

However, **Rubinstein** discloses a feature index/color table in which a corresponding relation of the feature index to a color is registered; wherein the document output unit determines the color corresponding to the feature index of each retrieval keyword with reference to the feature index/color table, and displays the retrieval keyword using the determined color in a different manner from a manner in which other words are displayed. (See column 16, lines 56 – 62 "...keywords found in more than one web page are displayed in a different color than those found in only one web page. It will be appreciated that other techniques may be used to distinguish unique keywords or keyword phrases from non-unique keywords or keyword phrases without departing from the spirit and scope of the present invention." Here, if the keyword is used more than once a different color is used from keywords only used once.)

It would have been obvious to one with ordinary skill in the art at the time of the invention to combing the teachings of **Nomiyama** with that of **Rubinstein** because both references are related to optimizing keyword usage for retrieving documents, and by including the color table disclosure of **Rubinstein,** the keywords that are used more

frequently are distinguished for the user, allowing them to more efficiently find relevant keywords. It is for this reason that one of ordinary skill in the art would have been motivated to include a feature index/color table in which a corresponding relation of the feature index to a color is registered; wherein the document output unit determines the color corresponding to the feature index of each retrieval keyword with reference to the feature index/color table, and displays the retrieval keyword using the determined color in a different manner from a manner in which other words are displayed.

11. Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nomiyama** as applied to claim 1 and 13 above, and further in view of **Bates et al.** (hereinafter **Bates**, US 2002/0174118). **Nomiyama** teaches a document retrieval apparatus substantially as claimed. **Nomiyama** does not explicitly disclose a feature index/gray scale table in which a corresponding relation of the feature index to a gray scale of a color is registered; wherein the document output unit determines the gray scale of the color corresponding to each feature index of the retrieval keyword with reference to the feature index/gray scale table, and displays the retrieval keyword using the determined gray scale of the color in a different manner from a manner in which other words are displayed.

However **Bates** discloses a feature index/gray scale table in which a corresponding relation of the feature index to a gray scale of a color is registered; wherein the document output unit determines the gray scale of the color corresponding to each feature index of the retrieval keyword with reference to the feature index/gray

scale table, and displays the retrieval keyword using the determined gray scale of the color in a different manner from a manner in which other words are displayed. (See page 2, paragraph [0015] "For example, if a web page contained the keyword "cricket" eight times and the keyword "bat" two times, eighty percent of the visual area of the correlation indicator could be blue and twenty percent green." These represent a scaled amount of their color that represents the proportion the document was used in selecting the document. The fact that the color in the example used is blue or green does not change the fact that it could have been grey. The basic idea of a scaled version of color is shown.)

It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the references of **Nomiyama** with that of **Bates** because both are related to optimizing keyword usage for retrieving documents, and by including the scale of color representing the amount of times the keyword is found in the document as in the disclosure of **Bates**, the keywords that are used more frequently are distinguished for the user, allowing them to more efficiently find relevant documents. It is for this reason that one of ordinary skill in the art would have been motivated to include a feature index/gray scale table in which a corresponding relation of the feature index to a gray scale of a color is registered; wherein the document output unit determines the gray scale of the color corresponding to each feature index of the retrieval keyword with reference to the feature index/gray scale table, and displays the retrieval keyword using the determined gray scale of the color in a different manner from a manner in which other words are displayed.

12. Claims 5, 6, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nomiyama** as applied to claims 1 and 13 above, and further in view of **Sumita et al.** (hereinafter **Sumita**; US 5,907,836).

13. Regarding claims 5 and 17, **Nomiyama** discloses a document retrieval apparatus substantially as claimed. **Nomiyama** does not explicitly disclose a feature index/type face table in which a corresponding relation of the feature index to a type face is registered; wherein the document output unit determines the type face corresponding to the feature index of each retrieval keyword with reference to the feature index/type face table, and displays the retrieval keyword using the determined type face in a different manner from a manner in which other words are displayed.

However, **Sumita** discloses a feature index/type face table in which a corresponding relation of the feature index to a type face is registered; wherein the document output unit determines the type face corresponding to the feature index of each retrieval keyword with reference to the feature index/type face table, and displays the retrieval keyword using the determined type face in a different manner from a manner in which other words are displayed. (See column 31, lines 42 – 46 "The emphasis-expression is display to be usually performed such that a portion of text is emphasized as compared with other portions by using an additional symbol, such as an underline, a different font, a character having different size or different color.")

It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the references of **Nomiyama** with that of **Sumita** because both are related to enhancing the retrieval of documents, and by including the type face differentiation as in the disclosure of **Sumita**, the keywords that are used more frequently are distinguished for the user, allowing them to more efficiently find relevant documents. This motivation is also included in **Sumita** on column 31, lines 65 – 67 "The foregoing fact improves the efficiency in performing an operation for determining the usefulness of the article presented for relevance feedback for example." It is for this reason that one of ordinary skill in the art would have been motivated to include a feature index/type face table in which a corresponding relation of the feature index to a type face is registered; wherein the document output unit determines the type face corresponding to the feature index of each retrieval keyword with reference to the feature index/type face table, and displays the retrieval keyword using the determined type face in a different manner from a manner in which other words are displayed.

14. Regarding claims 6 and 18, the combination of **Nomiyama** and **Sumita** additionally discloses the type face includes at least one of font, size, and style of a character. (See column 31, lines 42 – 46 "The emphasis-expression is display to be usually performed such that a portion of text is emphasized as compared with other portions by using an additional symbol, such as an underline, a different font, a character having different size or different color.")

15. Claims 7 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nomiyama** as applied to claims 1 and 13 above, and further in view of **Morita** (US 5,168,565). **Nomiyama** discloses a document retrieval apparatus substantially as claimed. **Nomiyama** does not explicitly disclose a ranking unit that ranks the retrieval keywords included in the selected documents in accordance with a feature index indicating an extent to which each retrieval keyword has contributed to the selection of the selected documents; wherein the document output unit, when highlighting the retrieval keywords in the determined manner, displays the result of the ranking with the contents of one of the selected documents.

However, **Morita** discloses a ranking unit that ranks the retrieval keywords included in the selected documents in accordance with a feature index indicating an extent to which each retrieval keyword has contributed to the selection of the selected documents; wherein the document output unit, when highlighting the retrieval keywords in the determined manner, displays the result of the ranking with the contents of one of the selected documents. (See column 9, lines 26 – 35 "The sorter 53 sorts the group of the related keywords which are obtained from the keyword relationship/relevance calculator 52 in a sequence starting from the related keywords having the largest relationship value to the related keyword having the smallest relationship value. The sorted group of the related keywords is supplied to the table controller. The table controller supplies the group of the related keywords to the display device 708 for monitoring by the user." This is another way of saying the keywords are ranked and displayed.)

It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the references of **Nomiyama** with that of **Morita** because both are related to optimizing keyword usage for document retrieval, and by including the ranking by relevance teaching of **Morita**, the user is able to use the apparatus more efficiently because the most relevant keywords to the document are displayed earlier in the list. It is for this reason that one of ordinary skill in the art would have been motivated to include a ranking unit that ranks the retrieval keywords included in the selected documents in accordance with a feature index indicating an extent to which each retrieval keyword has contributed to the selection of the selected documents; wherein the document output unit, when highlighting the retrieval keywords in the determined manner, displays the result of the ranking with the contents of one of the selected documents.

16. Claims 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nomiyama** as applied to claims 8 and 20 above, and further in view of "**EAST 1.1 Enhancements** – Search and Information Resources Administration Automation Training", July 2000, http://ptoweb/patents/training" (hereinafter **EAST**). **Nomiyama** discloses a document retrieval apparatus substantially as claimed. **Nomiyama** does not explicitly disclose the query character string input unit accepts a designation of a retrieval keyword that is not to be highlighted in the designated one of the selected documents. However, **EAST** discloses the query character string input unit accepts a designation of a retrieval keyword that is not to be highlighted in the designated one of the selected documents. (See page 37 where terms that are necessary for the search,

but do not need to be highlighted can be deselected.) It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teachings of **Nomiyama** with that of **EAST** because both are related to using keywords to retrieve relevant documents, and by including the non-highlighting of certain keywords as disclosed in **EAST**, the user can most efficiently search by only viewing words that are likely to be most relevant to the search, while excluding highly used keywords that are necessary for the search, but not for determining the most relevant document. It is for this reason that one of ordinary skill in the art would have been motivated to include the query character string input unit accepts a designation of a retrieval keyword that is not to be highlighted in the designated one of the selected documents.

17. Claims 10 – 12 and 22 - 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nomiyama** in view of **Hussam** (US 2003/0050927).

18. Regarding claims 10 and 22, **Nomiyama** discloses a document retrieval apparatus and method, comprising:

a query character string input unit that accepts an input of a query character string including a plurality of retrieval keywords (See column 4, lines 24 – 27 "The user input/display module 210 gives a keyword to be retrieved or other commands to the keyword retrieval engine 208...");

a document select unit that selects one or more documents that match the query character string from a document database (See column 4, lines 55 – 60 "At step 304 the keyword or retrieval expression inputted thus is delivered to the keyword retrieval

engine 208, by use of which the keyword retrieval engine 208 retrieves the keyword-to-ID index 204 and returns a set of Ids for documents corresponding to the keyword or retrieval expression.");

a retrieval result output unit that presents retrieval results of the selected documents to a user (See column 4, lines 61 – 65 "At step 306, based on a set of documents obtained at Step 304, the results of keyword retrieval (number of retrievals, title, or the like) are determined preferably on individual and separate windows in display 110 by the user input/display module 210."); and

a document output unit that presents the contents of one of the selected documents designated by the user (See column 5, lines 43 – 46 "At Step 408, by viewing titles of the list resultant from a retrieval displayed on a separate windows as a result of Step 406, a user selects one or plural documents that seem to be interesting.");

Nomiyama does not explicitly disclose one of the query character string input unit and the retrieval result output unit displays a list of the retrieval keywords used for the retrieval; and when one of the retrieval keywords in the list is selected, the document output unit scrolls the presented one of the selected documents up to a place where the selected one of the retrieval keywords is first displayed.

However, **Hussam** discloses one of the query character string input unit and the retrieval result output unit displays a list of the retrieval keywords used for the retrieval (See page 22, paragraph [0389] "This page consists of a legend of the keywords used to locate the document, relating to the keywords to the colors used in the result items.

After the legend is the document itself within the document, each occurrence of a keyword is highlighted in the related color."); and

when one of the retrieval keywords in the list is selected, the document output unit scrolls the presented one of the selected documents up to a place where the selected one of the retrieval keywords is first displayed. (See page 22, paragraph [0390] "Clicking o the down arrow for a keyword will scroll the document to the next occurrence of that keyword in the file.")

It would have been obvious to one with ordinary skill in the art at the time of the invention to combine the teachings of **Nomiyama** with that of **Hussam** because both are related to optimizing the location of documents by using keywords and by including the keyword scrolling as disclosed in **Hussam**, the user is able to more efficiently locate the keyword in the context of the documents. It is for this reason that one of ordinary skill in the art would have been motivated to include one of the query character string input unit and the retrieval result output unit displays a list of the retrieval keywords used for the retrieval; and when one of the retrieval keywords in the list is selected, the document output unit scrolls the presented one of the selected documents up to a place where the selected one of the retrieval keywords is first displayed.

19. Regarding claims 11 and 23, the combination of **Nomiyama** and **Hussam** additionally disclose when any one of the retrieval keywords included in the presented one of the selected documents is selected, the document output unit scrolls to a next place where the selected one of the retrieval keywords appears and displays the next

place. (See page 22, paragraph [0390] "Clicking on the down arrow for a keyword will scroll the document to the next occurrence of that keyword in the file.")

20. Regarding claims 12 and 24, the combination of **Nomiyama** and **Hussam** additionally discloses the document output unit can display position information that indicates a position of the selected one of the retrieval keywords in the presented one of the selected documents. (See page 23, paragraph [0392].)

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Doganata et al. (US 2003/0220913) discloses the concept of a keyword score.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis L. Vautrot whose telephone number is 571-272-2184. The examiner can normally be reached on Monday-Friday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dv
12 October 2006

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/ Lu